



# UNITED STATES PATENT AND TRADEMARK OFFICE

UNITED STATES DEPARTMENT OF COMMERCE  
United States Patent and Trademark Office  
Address: COMMISSIONER FOR PATENTS  
P.O. Box 1450  
Alexandria, Virginia 22313-1450  
www.uspto.gov

APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
10/810,676	03/29/2004	Byung Chul Ahn	8733.1044.00-US	1169
30827	7590	08/17/2006	EXAMINER	
MCKENNA LONG & ALDRIDGE LLP 1900 K STREET, NW WASHINGTON, DC 20006			TON, MINH TOAN T	
			ART UNIT	PAPER NUMBER
			2871	

DATE MAILED: 08/17/2006

Please find below and/or attached an Office communication concerning this application or proceeding.

**Office Action Summary**

Application No.

10/810,676

Applicant(s)

AHN ET AL.

Examiner

Toan Ton

Art Unit

2871

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --  
Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) OR THIRTY (30) DAYS, WHICHEVER IS LONGER, FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

**Status**

- 1) ☒ Responsive to communication(s) filed on 07 June 2006.  
2a) ☒ This action is **FINAL**. 2b) ☐ This action is non-final.  
3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

**Disposition of Claims**

- 4) ☒ Claim(s) 1-38 is/are pending in the application.  
4a) Of the above claim(s) 3,7-9 and 20-37 is/are withdrawn from consideration.  
5) ☐ Claim(s) \_\_\_\_\_ is/are allowed.  
6) ☒ Claim(s) 1,2,4-6,10-19 and 38 is/are rejected.  
7) ☐ Claim(s) \_\_\_\_\_ is/are objected to.  
8) ☐ Claim(s) \_\_\_\_\_ are subject to restriction and/or election requirement.

**Application Papers**

- 9) ☐ The specification is objected to by the Examiner.  
10) ☐ The drawing(s) filed on \_\_\_\_\_ is/are: a) ☐ accepted or b) ☐ objected to by the Examiner.  
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).  
Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).  
11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

**Priority under 35 U.S.C. § 119**

- 12) ☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).  
a) ☐ All b) ☐ Some \* c) ☐ None of:  
1. ☐ Certified copies of the priority documents have been received.  
2. ☐ Certified copies of the priority documents have been received in Application No. \_\_\_\_\_.  
3. ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).  
\* See the attached detailed Office action for a list of the certified copies not received.

**Attachment(s)**

- 1) ☒ Notice of References Cited (PTO-892)  
2) ☐ Notice of Draftsperson's Patent Drawing Review (PTO-948)  
3) ☒ Information Disclosure Statement(s) (PTO-1449 or PTO/SB/08)  
Paper No(s)/Mail Date \_\_\_\_\_.  
4) ☐ Interview Summary (PTO-413)  
Paper No(s)/Mail Date. \_\_\_\_\_.  
5) ☐ Notice of Informal Patent Application (PTO-152)  
6) ☐ Other: \_\_\_\_\_.

***Claim Rejections - 35 USC § 103***

1. The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

2. Claims 1-2, 4-6, 10-19 and 38 are rejected under 35 U.S.C. 103(a) as being unpatentable over Kim (US 2002/0051110).

Kim discloses a liquid crystal display of horizontal electric field applying type, which comprises (see at least Figures 6, 8): a thin film transistor array substrate, comprising: a gate line; a common line parallel to the gate line; a data line crossing the gate line and the common line with a gate insulating film therebetween to define a pixel area; a thin film transistor formed on each intersection of the gate line and the data line; a pixel electrode (e.g., 82) connected to the thin film transistor; a gate pad (e.g. 84) formed with at least one conductive layer included in the gate line; a data pad (e.g., 86) formed with at least one conductive layer included in the data line; a passivation film exposing the gate pad, the data pad and the common pad, which are formed on a substrate to form the thin film transistor array substrate; a color filter array (see at least [0026]) combined with the thin film transistor array substrate, liquid crystal material being filled between the color filter and the thin film transistor array substrate; and a conductive film (e.g., ACF 250) connected to the gate pad, the data pad, said pads exposed on the thin film transistor array substrate.

The use of an in-plane-switching field LCD device comprising a common electrode/line/pad formed of at least a conductive layer in the common electrode line and the pixel electrode formed on the same substrate (thereby yielding a horizontal field) is common and known in the art for achieving advantages such as wide viewing angle. Therefore, it would have been at least obvious to one of ordinary skill in the art at the time the invention was made to employ a common electrode/line and the pixel electrode formed on the same substrate (thereby yielding a horizontal field), as common and known in the art for achieving advantages such as wide viewing angle.

Kim discloses the contact holes formed at the insulating /passivation layer/film while exposing the common pad(s) (see at least [0025]). Further, it would have been at least obvious to one of ordinary skill in the art at the time the invention was made to employ a conductive film (e.g., ACF 250) connected to the common pad for achieving advantages such as reinforcing adhesion while saving manufacturing cost.

Kim discloses the display device comprising the use of subsidiary conductive pads (see at least [0025], [0029]).

Kim discloses the gate line and the data line having a double-layered structure (e.g., aluminum-based layer, see at least [0024]).

The use of an etch stopper/preventive layer is common and known in the art for achieving advantages such as preventing undesirable-etching regions (e.g., substrate, semiconductor region). Therefore, it would have been at least obvious to one of ordinary skill in the art at the time the invention was made to employ an etch stopper/preventive layer, as common and known

Art Unit: 2871

in the art for achieving advantages such as preventing undesirable-etching regions (e.g., substrate, semiconductor region).

***Response to Arguments***

3. Applicant's arguments filed 06/07/06 have been fully considered but they are not persuasive.

Applicant contended that the Examiner has not provided any references supporting IPS-LCD device comprising common electrode/line/pad and pixel electrodes formed on the same substrate.

It is noted that Applicant has not challenged such official notice is not well known in the art. The use of an in-plane-switching field LCD device comprising a common electrode/line/pad formed of at least a conductive layer in the common electrode line and the pixel electrode formed on the same substrate (thereby yielding a horizontal field) is common and known in the art for achieving advantages such as wide viewing angle. Therefore, it would have been at least obvious to one of ordinary skill in the art at the time the invention was made to employ a common electrode and the pixel electrode formed on the same substrate (thereby yielding a horizontal field), as common and known in the art for achieving advantages such as wide viewing angle [see at least Komatsu (US 6259502), Park (US 6611309), Song (US 2001/0013915)].

***Conclusion***

4. **THIS ACTION IS MADE FINAL.** Applicant is reminded of the extension of time policy as set forth in 37 CFR 1.136(a).


A shortened statutory period for reply to this final action is set to expire THREE MONTHS from the mailing date of this action. In the event a first reply is filed within TWO MONTHS of the mailing date of this final action and the advisory action is not mailed until after the end of the THREE-MONTH shortened statutory period, then the shortened statutory period will expire on the date the advisory action is mailed, and any extension fee pursuant to 37 CFR 1.136(a) will be calculated from the mailing date of the advisory action. In no event, however, will the statutory period for reply expire later than SIX MONTHS from the mailing date of this final action.

***Contact Information***

5. Any inquiry concerning this communication or earlier communications from the examiner should be directed to Toan Ton whose telephone number is (571) 272-2303.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free).

August 10, 2006

  
TOANTON  
PRIMARY EXAMINER